Status Report 2004

of

Solid Waste-Resource Management in Nova Scotia

Nova Scotia,
A World Leader in Recycling

2004

Nova Scotia Environment and Labour

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Waste-Resource Management in Nova Scotia

Foreword

Nova Scotia has excelled at turning waste into value-added products and jobs. Since the release of the Province's Solid Waste-Resource Management Strategy in 1996, Nova Scotians are now sending about half the amount of waste to municipal disposal sites.

This report provides a snapshot of the major successful waste-resource management diversion activities in Nova Scotia.

An Independent Report Has Confirmed that Nova Scotia is a World Leader in Recycling and Composting!

In July 2004, GPI*Atlantic* released the findings of a full cost-benefit study of Nova Scotia's solid waste management system. The full report, as well as a summary and media clippings can be found at **http://www.gpiatlantic.org**

1. The Nova Scotia Strategy: Summary

When the Nova Scotia Environment Act became law in January 1995, the province formally adopted the Canadian target of 50% diversion of solid waste from disposal by the year 2000. The Act also committed Nova Scotia Environment and Labour to develop a comprehensive strategy for the management of solid waste-resources in Nova Scotia. That commitment resulted in the November 1995 release of the document, "*Solid Waste Resource Management: A Strategy for Nova Scotians.*"

The strategy followed extensive consultation with people involved in all aspects of the solid waste system. Municipalities, industry representatives and members of the general public all took part. The strategy provides the following benefits:

- Maximizes environmental protection
- Maximizes economic activity
- Minimizes the potential increases in the cost of managing solid waste.

The Solid Waste-Resource Management Strategy has four (4) main goals:

Achieve 50 percent diversion by December 31, 2000.

Implement new disposal standards by December 31, 2005.

Achieve greater regional cooperation to reduce costs.

Increase economic opportunities through recognition of waste as a resource

The rest of this report will highlight the many initiatives that have been undertaken in support of the strategy and its goals.

2. Resource Recovery Fund Board (RRFB)

The Resource Recovery Fund Board Inc. (RRFB Nova Scotia) is a private, not-for-profit organization that has been directed under an act of the Nova Scotia Legislature to administer a substantial portion of the Solid Waste-Resource Management Strategy. Its Board of Directors has representation from industry, municipalities, and the provincial government.

The RRFB has five mandates:

1. Fund municipal or regional diversion programs
2. Develop and operate a deposit/refund system for beverage containers
3. Develop and implement industry stewardship programs
4. Develop awareness of reduction, reuse, recycling and composting
5. Promote the development of value-added manufacturing in the Province

By the Numbers.....

99% of Nova Scotians have curbside recycling

76% have curbside collection and compost collection

87% of households are within 20km of an ENVIRO-DEPOT™

1000 jobs created by the Strategy

1.5 billion beverage containers have been recycled since 1996.

900,000 tires are reused or recycled each year

Over 400,000 litres of leftover paint have been recycled

Highlights since April 1, 1996 (as of June, 2004):

- Established a network of 84 Enviro-Depots and five Regional Processing Facilities
- Administers the Deposit/Refund system for beverage containers
- Instituted the Used Tire Management Program
- Have provided municipalities with over $44.2 million for the implementation of the Solid Waste Resource Management Strategy
- Established the Nova Scotia Paint Recycling Program

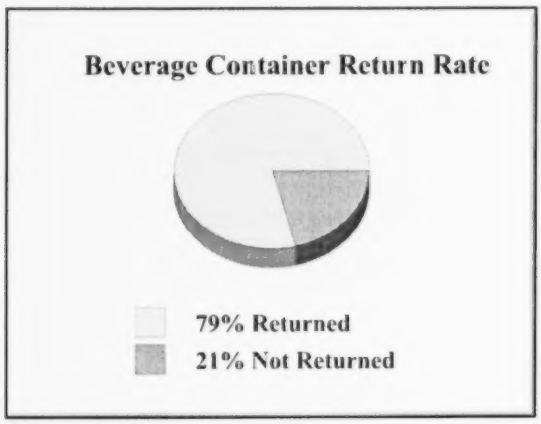
3. Beverage Container Recycling Program

The Deposit/Refund System for Beverage Containers, which came into effect April 1, 1996, applies to all ready-to-serve beverages with the exception of dairy products.

Consumers pay a 10-cent deposit on each non-alcoholic beverage container and on each alcoholic beverage container equal to, or less than 500ml purchased. A 5-cent refund is given for each of these containers that are returned to an Enviro-Depot. Alcoholic beverages more than 500ml have a 20-cent deposit with a 10-cent return.

Highlights:

- During fiscal year 2004, 241 million beverage containers were redeemed, which represents a return rate of 79%
- Since April 1,1996, over 1.5 billion beverage containers have been recycled



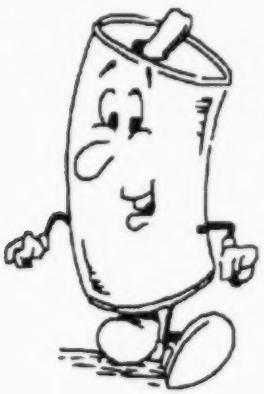
4. Curbside Recycling

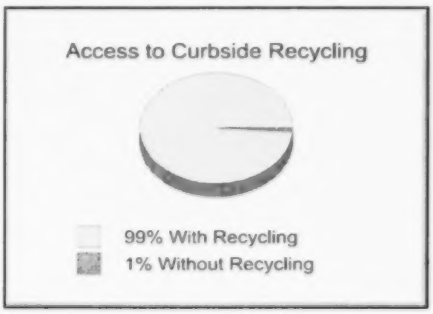
Curbside recycling programs provide a convenient means for recycling materials banned from disposal in Nova Scotia. A list of the banned materials is as follows:'

Compostable Organics
Beverage Containers
Steel/Tin Food Containers
Used Tires
Waste Paint
Newsprint
Glass Food Containers
#2 HDPE Containers
Automotive Lead-acid Batteries
Corrugated Cardboard

Some municipalities collect items beyond those that are banned such as mixed paper, magazines, plastic containers numbered 1 through 6, aluminum containers, aluminum pie plates, etc.

In each of the waste management plans developed by the regions, curbside recycling was identified as an important tool in achieving significant levels of diversion.





How are we doing?

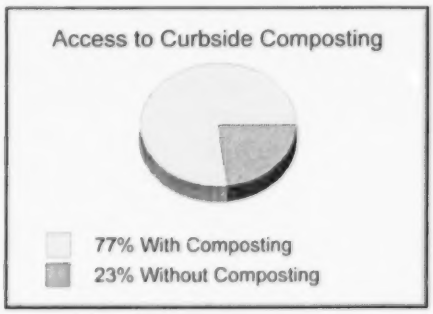
- 99% of the population has access to curbside recycling programs

5. Composting

30 - 50% of our waste is organic material such as food scraps, leaves, grass clippings, garden waste and non-recyclable paper. Organic material, when exposed to water, forms a liquid called leachate. Leachate, itself a contaminant, picks up other contaminants from the surrounding garbage and can pollute neighbouring water resources if it escapes from the landfill site. Organic matter frequently decays anaerobically in landfills producing methane, a gas that contributes to global warming. Keeping organic materials out of landfills and turning it into a valuable resource, compost, that enhances the soil, is one way to reduce environmental risk.

The Department of the Environment banned compostable organic material from landfills November 30, 1998. This is a progressive step that places Nova Scotia as a leader in waste management in North America. No other province in Canada has implemented such a ban.

How are we doing?



77% of the population of Nova Scotia, have curbside collection and centralized composting of food, waste, leaf and yard waste, and non-marketable paper products.

53 of 55 municipalities offer centralized composting to their business sector (supermarkets, restaurants, food processing plants, fish plants, etc.)

Back yard composting programs have also been implemented in many areas of Nova Scotia. This method is effective in managing some organic wastes, and allows the home owner to close the waste loop by making useable compost on their own property.

6. Public Education and Awareness

It has been said in the field of waste-resource management that the 3R's are really "education", "education", "education". Although we cannot forget what the 3R's really stand for, education is one of the most important elements in ensuring successful diversion programs. To that end, the Resource Recovery Fund Board Inc. (RRFB Nova Scotia) has been mandated to develop a province-wide public education and awareness campaign for waste diversion. In addition, municipal waste educators provide community education through newsletters, events, and other initiatives.

How are we doing?

- In fiscal 2004, RRFB Nova Scotia committed $1.4 million to promote the 3R's and composting, through education and awareness.

- RRFB Nova Scotia has produced countless booklets, brochures, and signage, as well as posters and guides, to promote recycling and composting. Examples are the popular *Green Office Checklist*, and a recent *Sorting it Out* guide and poster for quick-service restaurants. Visit www.rrfb.com for more information.

- The recycling robot, Moby S. Loop has been a popular member of RRFB Nova Scotia's team, entertaining and educating people of all ages about waste-resource management. The robot is named after the mobius recycling symbol ♻

- RRFB Nova Scotia operates a recycling and composting information hotline for the entire province at 1-877-313-7732.

- RRFB Nova Scotia works closely with municipalities and environmental organizations, in its educational activities. One example is the coordination of an annual Waste Reduction week, together with municipal waste educators and Clean Nova Scotia.

- Municipalities also dedicate significant resources to promote waste diversion programs in their areas.

7. Tire Recycling

On January 2, 1997, the Used Tire Management Program began collecting used tires for recycling. Now, all used tires that are left with registered tire retailers, are diverted from disposal sites in Nova Scotia. There are approximately 900 registered tire retailers throughout the Province.

When new tires are purchased in Nova Scotia, a $3 environmental fee for each car tire and a $9 fee for each truck tire over 17 inches, is charged to support this new recycling program. Each year, Nova Scotia is generate approximately 1,000,000 used tires for disposal. Removing tires from disposal sites reduces waste and removes a potential fire and health hazard.

A surplus of funds has been generated through the Used Tire Management Program and the RRFB has designated that money for the clean up of old tire stockpiles located throughout Nova Scotia.

Did you Know...

Old tires are processed into crumb rubber which is used in the manufacturing of underlay for sports fields.

Highlights:

- Stewardship agreements have been signed with approximately 900 tire retailers.
- More than 5.6 million tires have been diverted from disposal since the introduction of the Used Tire Management Program.
- Over 50,000 tires have been recovered and recycled from old tire stockpiles.

8. Paint Recycling

On June 1, 2002, the *Nova Scotia Paint Recycling Program* was launched. Nova Scotians can return their leftover household paint to any one of Nova Scotia's ENVIRO-DEPOTS™, at no charge. To fund this program, a small fee is added to the cost of new paint in Nova Scotia. The program is supported by the paint industry which is committed to the responsible stewardship of its products.

The paint returned to ENVIRO-DEPOTS™ is recycled into new paint by the Paint Recycling Company in Springhill, Nova Scotia.

Nova Scotians purchase more than three million containers of paint every year and up to 25% of this paint is never used. The paint recycling program keeps this paint out of disposal sites and the environment, while creating jobs, and re-using resources efficiently.

The Benefits of Giving Paint a Second Chance...

- Keeps paint out of disposal sites
- Protects groundwater, streams and lakes
- Creates jobs by turning waste into a resource

Highlights

- Since June 2002, more than 403, 000 litres of new paint have been produced.
- 259 000 litres of paint were recycled in fiscal 2004.
- The Paint Recycling Company is 1 of only 6 North American companies specializing in the recovery of leftover paint.

9. Measuring Diversion

Nova Scotians are practising the 3Rs, Reduce, Reuse and Recycle, and are composting like never before. From ENVIRO-DEPOTS™, to municipal curbside programs and tire recycling, to simply practising smarter buying habits, Nova Scotians have caught on to waste reduction. Evidence of this can be found in the diversion rate we have achieved.

How are we doing?

- In 2002 Nova Scotians diverted **46%** of solid waste from landfills and incinerators. Through the efforts of our municipalities and citizens this number will climb!
- In 1989, each Nova Scotian threw out **747 kg** of garbage per year. This was reduced to roughly **400 kg** this year.
- The amount of landfill space saved across the province from diverting waste is the equivalent to eliminating **9** average sized landfills.
- While our current diversion rates have fallen slightly from our 50% achievement of 2000, Nova Scotians still boast an enviable level of diversion and will continue to improve on it.

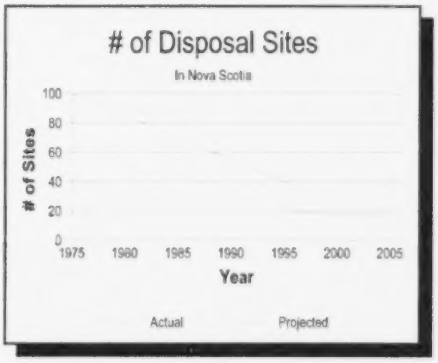
10. Landfilling and Incineration

Disposal sites are a necessary component of managing waste. However, we are reducing the quantity of material incinerated and the volume of landfill space required for disposal through the 3 R's and composting. Also, through design improvements we can better protect our environment. This is one of the goals of the strategy.

In the early 1970s there were in excess of 100 dumps operating, most of which employed open burning as a means of disposal. These open burning sites used little or no pollution control measures, and resulted in emissions of particulate matter, carbon monoxide, dioxins and furans.

By 1996, twenty (20) open burning sites remained in operation. On April 1 of that year the Department of the Environment banned open burning as a means of disposal. All existing sites were subsequently shut down.

To protect the environment the province now requires all new landfills to use plastic and soil liner systems and to collect and treat the leachate. These new systems called "containment landfills," ensure that leachate does not pollute ground water but instead, is drained away to collection areas and treated. All existing landfills are required to meet these standards by the year 2005.



How are we doing?

- Only 18 municipal solid waste disposal sites remain in Nova Scotia.
- Disposal sites in Cumberland and Colchester Counties and Halifax Regional Municipality meet the new landfill guidelines.
- It is anticipated that the number of municipal disposal sites will be reduced to as few as 7 by 2006
- There are 6 approved private Construction and Demolition (C&D) debris disposal sites in the province, and 8 small municipal C&D sites.

We are moving toward fewer, better landfills.

11. Economic Opportunities

Nova Scotia was built on its resources of fishing, mining, and forestry. Now we are looking to our newest resource, solid waste, to create economic and employment opportunities for Nova Scotians.

How are we doing?

Following are just a few examples of the many opportunities that result from recognizing our waste as a resource:

- Novapet Inc. is a plastics processing facility located in Amherst, Nova Scotia. Novapet grinds PET plastic (ie. plastic pop bottles) from the Atlantic region and Eastern US for sale to markets in Canada and the United States where it is used to manufacture items such as carpet and clothing.

- Minas Basin Pulp and Power in Hantsport manufactures liner board from old corrugated cardboard. The liner board is used to manufacture new boxes by Maritime Paper Products.

- The Paint Recycling Company in Springhill turns old waste paint into a new and valuable paint product.

Job Creation Through Solid Waste:

- There are over 3000 jobs in the Solid Waste Resource field. 1000 of these are new since the Strategy was released in 1996.

- Over 600 jobs manufacturing recyclable materials into new products.

- Over 150 jobs at recycling facilities.

- Over 50 jobs as a result of transporting and processing tires.

- 44 jobs have been produced through the processing of PET plastic at Novapet.

- Over 500 jobs created with the transporting of waste, recyclable and organics.

12. Future Initiatives

Nova Scotian can be proud of what has been accomplished. Even with this success, we continue to work with all sectors of society to ensure that more waste is kept out of our landfills.

One exciting program that the province is currently developing is an Electronic Product Stewardship Program. Electronic waste is a growing global concern, particularly due to the hazardous materials which it can contain. The Electronic Product Stewardship Program will ensure that the electronics industry takes responsibility for the reuse or recycling of waste, from products such as computers and televisions.

13. Conclusion

Nova Scotians can be proud of what has been accomplished. Since 1996, we have managed to compost more than 233,000 tonnes of organic material, and recycle 5.5 million tires, hundreds of thousands of tonnes of paper and plastic, steel/tin, aluminum and glass containers, and 1.5 billion beverage containers.

Our continued success in diverting materials from landfill will require continued enthusiasm, cooperation and perseverance on the part of all Nova Scotians.